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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/072,698	02/08/2002	Dirk Muessig	7163-38	2519

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EXAMINER

MULCAHY, JOHN M

ART UNIT PAPER NUMBER

3739

DATE MAILED: 11/07/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/072,698

Applicant(s)

MUESSIG ET AL.

Examiner

John M. Mulcahy

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-- Th MAILING DATE of this communication app ars on the cover sheet with th correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____ .
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-46 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4, 5 .
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____ .
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

a. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Adair (4,782,819). See col. 8, line 55, through col. 9, line 22.

b. Claims 1, 6, 10, 14, 18, 22, 26, 30, 34, 38 and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by Amundson et al. (6,178,346) which shows:

As to claim 1: An endoscopic catheter 25, 43 adapted for insertion into body cavities, comprising: a distal catheter portion (Fig. 12B); an illumination device 71 for illuminating an area around the distal catheter portion with electromagnetic radiation; an image recording unit 63 for recording an image of the electromagnetic radiation reflected by the area around the distal catheter portion and pass it to a proximal end of the catheter; an image reproduction unit 38, connected to the proximal end of the catheter and adapted to reproduce an image of the recorded electromagnetic radiation, wherein the catheter is adapted controllably for insertion into blood vessels , in particular blood vessels (see the first-third embodiments), and for reproducing the electromagnetic radiation image reflected by the area around the distal catheter portion, with a wavelength for which blood has a high transparency (see the Summary of the Invention).

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As to claim 6: the illumination device further comprises an illumination light waveguide 62 from the proximal to a distal catheter end, to pass electromagnetic radiation serving for illumination purposes from the proximal catheter end to the distal catheter end.

As to claims 10 and 14: the catheter is in the form of an electrode line and for that purpose is provided at its distal catheter portion with at least one electrode for delivering and/or picking up electrical signals to or from body tissue adjoining the distal catheter portion. See col. 33, lines 17-19, and col. 35, lines 26-33.

As to claims 18, 22, 26, 30, 34 and 38: the catheter carries an expandable balloon at its distal catheter portion suitably adapted for dilation of constricted blood vessels (angioplasty) and for inserting and expanding stents. See col. 1, line 65, through col. 2, line 43; col. 8, last para.; and the first embodiment.

As to claim 42: the catheter further comprises means for controlling a targeted deflection of the distal end of the catheter, actuatable from the proximal end thereof. See col. 32, lines 25-29.

c. Claims 1, 6, 10, 14, 18, 22, 26, 30, 34, 38 and 42 are rejected under 35 U.S.C. 102(e) as being anticipated by Stelzer et al. (6,309,345) which shows a catheter 505 adapted for insertion into body cavities, comprising:

As to claim 1: An endoscopic catheter 505 adapted for insertion into body cavities, comprising: a distal catheter portion (Fig. 14); an illumination device 3, 4 for illuminating an area around the distal catheter portion with electromagnetic radiation; an image recording unit 1, 2 for recording an image of the electromagnetic radiation

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reflected by the area around the distal catheter portion and pass it to a proximal end of the catheter (along lines 52); an image reproduction unit (heads-up display, see col. 6, lines 33-38), connected to the proximal end of the catheter and adapted to reproduce an image of the recorded electromagnetic radiation, wherein the catheter is adapted controllably for insertion into blood vessels 701, in particular blood vessels, and for reproducing the electromagnetic radiation image reflected by the area around the distal catheter portion, with a wavelength for which blood has a high transparency (col. 6, lines 58-61).

As to claim 6: the illumination device further comprises an illumination light waveguide 52 from the proximal to a distal catheter end, to pass electromagnetic radiation serving for illumination purposes from the proximal catheter end to the distal catheter end.

As to claims 10 and 14: the catheter is in the form of an electrode line and for that purpose is provided at its distal catheter portion with at least one electrode (Figs. 9 and 10) for delivering and/or picking up electrical signals to or from body tissue adjoining the distal catheter portion.

As to claims 18, 22, 26, 30, 34 and 38: the catheter carries an expandable balloon 504 at its distal catheter portion suitably adapted for dilation of constricted blood vessels (angioplasty) and for inserting and expanding stents. See col. 13, lines 26-41.

As to claim 42: the catheter further comprises means for controlling a targeted deflection of the distal end of the catheter, actuable from the proximal end thereof. See col. 7, lines 6-25.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

a. Claims 2, 3, 7, 8, 11, 12, 15, 16, 19, 20, 23, 24, 27, 28, 31, 32, 35, 36, 39, 40, 43 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stelzer et al. (6,309,345) as applied to claims 1, 6, 10, 14, 18, 22, 26, 30, 34, 38 and 42 above, further in view of Roth et al. (6,079,414), which incorporates Fantone et al. (4,786,155) by reference (col. 18, lines 24-26).

Stelzer et al. clearly shows the catheter substantially as claimed, but fails to specify the use of light in the claimed range of wavelengths (claims 2-4). However, Roth et al. show an analogous endoscope in which only those wavelengths of light not absorbed by blood are transmitted into the area of interest. See col. 18, lines 16-27.

As to claim 2: the endoscope reproduces an image recorded in a wavelength range of between 600 and 650 nanometers. See Fantone et al., the Summary of the invention.

As to claim 3: the illumination device illuminates the area around the distal catheter portion with infra-red light of a wavelength of between 600 and 650 nanometers. *Id.*

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Inasmuch as Stelzer et al. specify the use of wavelengths in which blood provides "the least vision obstruction" (col. 6, lines 58-61), it would have been obvious to the artisan to use the claim wavelengths since Roth et al. teach such to be meet this criteria.

b. Claims 4, 5, 9, 13, 17, 21, 25, 29, 33, 37, 41 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stelzer et al. (6,309,345) in view of Roth et al. (6,079,414), which incorporates Fantone et al. (4,786,155) by reference (col. 18, lines 24-26), as applied to claims 2, 3, 7, 8, 11, 12, 15, 16, 19, 20, 23, 24, 27, 28, 31, 32, 35, 36, 39, 40, 43 and 44 above, further in view of Adair et al. (4,782,819).

Fantone et al. fail to specify a band-pass filter. Rather, a light source 26 of the desired wavelength is used. However, Adair et al. show an analogous endoscope in which a band-pass filter 172, which only passes the desired frequency, is used. It would have been obvious to the artisan to further modify Stelzer by using a band-pass filter for a frequency within the claimed band since Adair teaches that such is equivalent to the arrangement of Fantone et al. See Adair, col. 9, lines 1-22, especially lines 1-6.

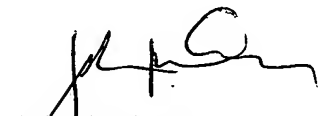
3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John M. Mulcahy whose telephone number is (703) 308-3134. The examiner can normally be reached on M-F, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda C. M. Dvorak can be reached on (703) 308-0994. The fax phone

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numbers for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0873.

A handwritten signature in black ink, appearing to read 'John M. Mulcahy', is positioned above the printed name and date.

John M. Mulcahy
November 1, 2002

John M. Mulcahy
Primary Examiner
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